

DESCRIPTION

The Electro-Voice Model SPA75 Siren/P.A. speaker has been designed for use with fixed and mobile P.A. warning systems and will handle 75-watt square wave emergency program energy.

The SPA75 Siren/P.A. speaker utilizes a heavy duty die cast mounting base with built-in terminal block. When flush mounted, it protects the speaker cable from weather and spontaneous vandalism.

Due to its unique assembly, replacement of component parts can be accomplished quickly and without frustration. Weather seals are provided between the vertical portion of the base, driver and horn. A base mounting gasket is also provided.

The horn is made of rugged weather resistant spun aluminum and finished in a tough gray enamel.

The driver utilizes a cast ductile iron pot structure for highest efficiency and permits the use of heat radiating fins to reduce the operating temperature as much as 41° Fahrenheit.

Recently developed materials have been employed in the coil form to drastically lessen the possibility of coil failure under the extreme acceleration of high-power square wave operation. The special insulated wire in the voice coil reduces high temperature insulation breakdown.

Modified drivers are available on special order. For details, contact your local Electro-Voice factory representative or the OEM Sales Department: Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (Phone: 616/695-6831).

GENERAL SPECIFICATIONS

The Model SPA75 speaker shall have a response shaped to complement warning program energy from 180–8000 Hz. The sound pressure level at 10' on axis with a 1Hz

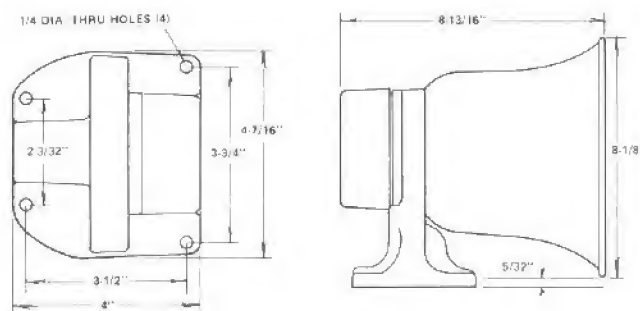


FIGURE 1—Dimensions

sweep from 400 to 2000 Hz at 75 watts square wave shall be 118 dB.

The power handling capacity shall be 75 watts continuous square wave program or 90 watts continuous sine wave program. The nominal voice coil impedance shall be 7 ohms.

The diaphragm shall be linen-base molded phenolic with a voice coil diameter of 2 inches. Field replacement without special tools is possible, but it is recommended that it be done by a competent service agency.

The driver housing shall consist of a cast ductile iron pot with a die cast front cover. The housing shall be completely weatherproof. The pot structure shall incorporate heat radiating fins.

Low Frequency Driver Protection: When frequencies at full power are fed to the driver below the horn cutoff, excessive current may be drawn by the driver. For the protection of the driver and amplifier, a series capacitor is recommended. The following are the recommended values for 200 Hz: 50 WV, 100 mf.

The SPA75 shall incorporate a weatherproofed die case fixed mounting base with built-in terminal block. Weather seals shall be provided for the base, driver, horn, and mounting surface interface.

INSTALLATION

1. Use base mounting gasket as a template for locating holes in mounting surface.
2. Provide holes for mounting and for speaker cable.
3. Route the speaker cable thru the hole provided on the mounting surface.
4. Drop gasket over cable and connect cable to terminal strip located in the mounting base. T1 is positive polarity.
5. Mount speaker assembly to mounting surface.

NOTE: The base need not be removed should access be required to certain component parts. Simply turn projector tube firmly in a counter-clockwise motion until removed. Access to driver is now possible.

When replacing be certain clearance is allowed for driver

leads and that all seals and gaskets are properly located. Hand tighten projector tube as much as possible.

NOTES

1. Power handling is based on continuous broadband program energy and is limited only by the range of optimum loading of the horn to air, particularly at low frequencies.

The driver should be protected by a capacitor when sustained (75 watt to 90 watt) maximum energy at frequencies below horn cutoff will exist.

Refer to the power rating chart for single frequency capability. The figures shown are conservative for a 30 to 40% duty cycle.

It should be noted that low frequency protection is not necessary for broad spectrum program energy when low-frequency "growl out" energy occurs at a power level approximate to the single frequency capability indicated on the chart.

2. Sound pressure at specified distance on axis with 1 Hz sweep from 400 to 2,000 Hz at 75 watts.
3. Sound pressure at specified distance on axis with 1 Hz sweep from 800 to 1,300 Hz at 90 watts.

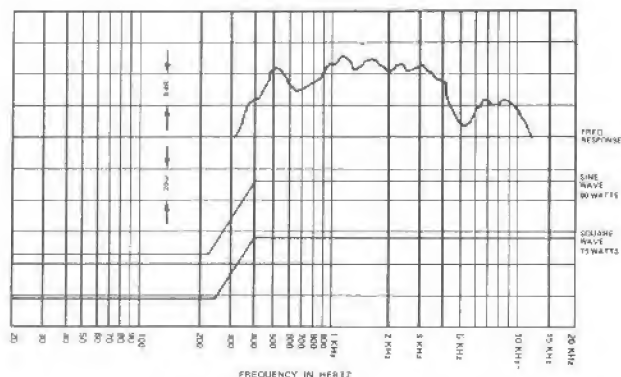


FIGURE 2—Frequency Response and Single Frequency Power Rating

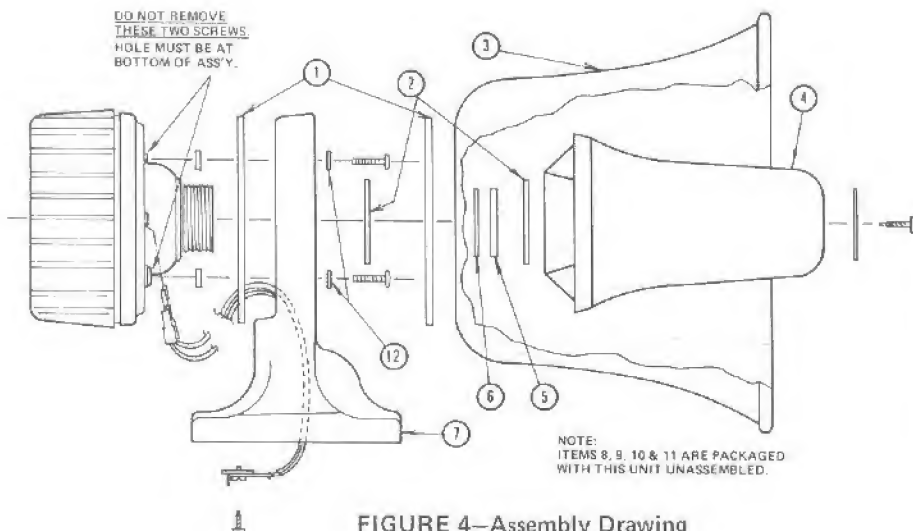


FIGURE 4—Assembly Drawing

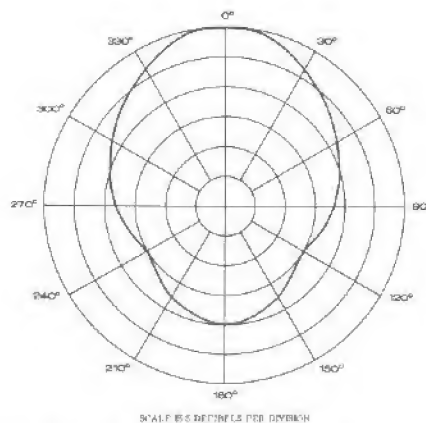


FIGURE 3—Polar Pattern, 700-1300 Hz Sweep Sq. Wave

SPECIFICATIONS

Frequency Response,

Square Wave:	350–8000 Hz
Sine Wave:	350–8000 Hz

Power Handling (Continuous Program), (See Note 1)

Square Wave:	75 watts
Sine Wave:	90 watts

Sound Pressure Level, (See Note 2)

Square Wave at 10 ft:	118 dB
Square Wave at 100 ft:	98 dB

Sound Pressure Level, (See Note 3)

Sine Wave at 4 ft:	126 dB
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Impedance,

DC:	4 ohms
AC (800–1300 Hz pink noise):	7 ohms

EIA Sensitivity:

58 dB

Terminal Polarity:

T1—positive, T2—negative

Terminals:

Terminal block in base

Finish:

Grey

Dimensions,

Largest Diameter: 8-1/8"

Overall Length: 8-13/16"

Net Weight:

7 lb.

Hardware Supplied:

Mounting gasket

Item	Part No.	Req'd	Description
1	38528	2	Gasket
2	38458	2	Washer, Fiber
3	79155	1	Bell
4	86609	1	Tube S/A
5	38490	1	Washer, Throat
6	38489	1	Washer, Throat
7	A78862	1	Base
8	38527	1	Base Gasket
9	62837	4	Bolt, Hes. Hd. 1/4-20 x 1 1/4
10	4097	4	Washer
11	20111	4	Locknut, 1/4-20
12	3998	2	Washer, Int. Tooth Lk.